

Claims

1. A method implemented by a push-to-talk wireless mobile terminal for communicating voice information comprising the steps of:

5

determining if a first input from a user of a first mobile terminal is made requesting that flexible acceptance management of incoming calls be initiated;

10 if said determining step determines that the request has been made, transmitting from the first mobile terminal a first control message to a communication application server representing an instruction to implement flexible acceptance of incoming calls to the first mobile terminal, where flexible acceptance includes storing an initial voice message associated with an incoming call to the first mobile terminal and not automatically transmitting the initial voice message to the first mobile terminal from the communication
15 application server.

2. The method of claim 1 further comprising the steps of receiving at the first mobile terminal a first alert message from the communication application server representing an incoming call, and generating a first alert output conveying an incoming call request to a user
20 of the first mobile terminal, the first alert message causing the first alert output to be unique to indicate that flexible acceptance is active.

3. The method of claim 2 further comprising the steps of determining if a second input from the user of the first mobile terminal is made requesting that the initial voice message
25 associated with the incoming call be transmitted to the first mobile terminal, and if the second input is determined to have been made, transmitting from the first mobile terminal to the communication application server a second control message representing a request to receive the initial voice message.

30 4. The method of claim 3 further comprising the steps of determining if a push-to-talk button is being depressed, and if the determination is made that the push-to-talk button is depressed, transmitting from the first mobile terminal to the communication application server a reply voice message addressed to an originator of the incoming call.

5. The method of claim 2 further comprising the steps of determining if a second input by the user has been made, and if the second input by the user has been made, causing a stored, prerecorded communication to be sent to a calling party associated with the incoming call.

5

6. The method of claim 2 further comprising the steps of automatically sending a stored, prerecorded communication to a calling party associated with the incoming call upon receipt of the first alert message while flexible acceptance is in use.

10 7. A push-to-talk wireless mobile terminal for communicating voice information comprising:

means for determining if a first input from a user of a first mobile terminal is made requesting that flexible acceptance management of incoming calls be initiated;

15

means for transmitting from the first mobile terminal a first control message to a communication application server representing an instruction to implement flexible acceptance of incoming calls to the first mobile terminal if said determining means determines that the request has been made, where flexible acceptance includes storing an initial voice message associated with an incoming call to the first mobile terminal and not automatically transmitting the initial voice message to the first mobile terminal from the communication application server.

20

8. The mobile terminal of claim 7 further comprising means for receiving at the first mobile terminal a first alert message from the communication application server representing an incoming call, and means for generating a first alert output conveying an incoming call request to a user of the first mobile terminal, the first alert message causing the first alert output to be unique to indicate that flexible acceptance is active.

25

9. The mobile terminal of claim 8 further comprising means for determining if a second input from the user of the first mobile terminal is made requesting that the initial voice message associated with the incoming call be transmitted to the first mobile terminal, and if the second input is determined to have been made, means for transmitting transmits from the

30

first mobile terminal to the communication application server a second control message representing a request to receive the initial voice message.

10. The mobile terminal of claim 9 further comprising means for determining if a push-to-talk button is being depressed, and if the determination is made that the push-to-talk button is depressed, means for transmitting transmits from the first mobile terminal to the communication application server a reply voice message addressed to an originator of the incoming call.

11. The mobile terminal of claim 8 further comprising means for determining if a second input by the user has been made, and if the second input by the user has been made, means for transmitting causing a stored, prerecorded communication to be sent to a calling party associated with the incoming call.

12. The mobile terminal of claim 8 further comprising means for automatically sending a stored, prerecorded communication to a calling party associated with the incoming call upon receipt of the first alert message while flexible acceptance is in use.

13. A method implemented by a push-to-talk wireless mobile terminal for communicating voice information comprising the steps of:

displaying a list of Pals on a screen of the mobile terminal;

receiving status update messages from a communication application server;

displaying visual indicia associated with at least some of the Pals, where the visual indicia indicates a presence state of the associated Pal;

the displaying visual indicia includes displaying at least first and second different visual indicia, where the first visual indicia represents a first corresponding Pal is available to receive calls, and the second visual indicia represents a second corresponding Pal is utilizing flexible acceptance to control the receipt of incoming calls.

14. The method of claim 13 further comprising the steps of initiating a push-to-talk call to the second Pal having the associated second visual indicia, and transmitting an initial voice message to the second Pal with the call initiation.

5 15. The method of claim 14 further comprising the step of receiving no indication at a calling party's mobile terminal from the communication application server of whether the second Pal listened to the initial voice message unless a reply indication is authorized by the second Pal.

10 16. The method of claim 14 further consisting the steps of receiving from the communication application server an authorization signal granting permission to transmit a voice message to a called party with flexible acceptance activated, and generating an authorization indicia via the calling party's mobile terminal, the authorization indicia being unique to indicate that flexible acceptance is in use by the called party.

15

17. A push-to-talk wireless mobile terminal for communicating voice information comprising:

means for displaying a list of Pals on a screen of the mobile terminal;

20

means for receiving status update messages from a communication application server;

means for displaying visual indicia associated with at least some of the Pals, where the visual indicia indicates a presence state of the associated Pal;

25

the means for displaying visual indicia including means for displaying at least first and second different visual indicia, where the first visual indicia represents a first corresponding Pal is available to receive calls, and the second visual indicia represents a second corresponding Pal is utilizing flexible acceptance to control the receipt of incoming calls.

30

18. The mobile terminal of claim 17 further comprising means for initiating a push-to-talk call to the second Pal having the associated second visual indicia, and means for transmitting an initial voice message to the second Pal with the call initiation.

19. The mobile terminal of claim 18 further consisting means for receiving from the communication application server an authorization signal granting permission to transmit a voice message to a called party with flexible acceptance activated, and means for generating an authorization indicia via the calling party's mobile terminal, the authorization indicia being unique to indicate that flexible acceptance is in use by the called party.

20. A method implemented by a communication application server that processes communications among users in a push-to-talk communication network comprising the steps of:

receiving a first control message from a first mobile terminal where the first control message represents an instruction to initiate a process providing flexible acceptance of incoming calls to the first mobile terminal;

in response to the first control message, updating a stored presence state associated with the first mobile terminal to reflect that incoming calls to the first mobile terminal will be processed in accordance with the flexible acceptance;

receiving an incoming call from a second mobile terminal for the first mobile terminal where a voice message from the second mobile terminal comprises part of the incoming call;

storing the voice message in memory;

transmitting an incoming call alert message to the first mobile terminal where the incoming call alert message does not contain the voice message.

21. The method of claim 20 further comprising the step of receiving a second control message from the first mobile terminal representing a request to transmit the stored initial voice message to the first mobile terminal.

22. The method of claim 21 further comprising the step of transmitting the stored initial voice message to the first mobile terminal in response to receipt of the second control message from the first mobile terminal.

5 23. The method of claim 21 further comprising the step of transmitting the stored initial voice message to the first mobile terminal only in response to receipt of the second control message from the first mobile terminal.

24. The method of claim 20 further comprising transmitting a presence status update
10 message to mobile terminals having the first mobile terminal as a Pal upon updating the presence state associated with the first mobile terminal.

25. The method of claim 22 further comprising the step of not providing any indication to
15 the second mobile terminal of the receipt of the second control message or that the first stored initial voice message was transmitted to the first mobile terminal.

26. The method of claim 20 further comprising starting a timeout timer associated with
the receipt of the incoming call where the timeout timer has a predetermined time period and
20 upon the timeout timer reaching the predetermined time period causing processing of the incoming call to the first mobile terminal to be aborted.

27. The method of claim 26 further comprising starting a timeout timer associated with
the receipt of the incoming call where the timeout timer has a predetermined time period and
25 upon the timeout timer reaching the predetermined time period, before receiving a reply communication from the first mobile terminal, causing processing of the incoming call to the first mobile terminal to be aborted.

28. The method of claim 27 wherein the causing the processing of the incoming call to
30 the first mobile terminal to be aborted includes deleting the initial voice message stored in memory.

29. The method of claim 20 further comprising starting a timeout timer associated with
the receipt of the incoming call where the timeout timer has a predetermined time period and

upon receiving a reply communication from the first mobile terminal before the timeout timer reaching the predetermined time period, causing the initial voice message from the second mobile terminal to be transmitted to the first mobile terminal.

- 5 30. A communication application server that processes communications among users in a push-to-talk communication network comprising:

 means for receiving a first control message from a first mobile terminal where the first control message represents an instruction to initiate a process providing flexible acceptance
10 of incoming calls to the first mobile terminal;

 means for updating, in response to the first control message, a stored presence state associated with the first mobile terminal to reflect that incoming calls to the first mobile terminal will be processed in accordance with the flexible acceptance;
15

 means for receiving an incoming call from a second mobile terminal for the first mobile terminal where an initial voice message from the second mobile terminal comprises part of the incoming call;

20 means for storing the initial voice message in memory;

 means for transmitting an incoming call alert message to the first mobile terminal where the incoming call alert message does not contain the initial voice message.

25

31. The communication application server of claim 30 further comprising means for receiving a second control message from the first mobile terminal representing a request to transmit the stored initial voice message to the first mobile terminal.

30 32. The communication application server of claim 31 further comprising means for transmitting the stored initial voice message to the first mobile terminal in response to receipt of the second control message from the first mobile terminal.

33. The communication application server of claim 31 further comprising means for transmitting the stored initial voice message to the first mobile terminal only in response to receipt of the second control message from the first mobile terminal.

5 34. The communication application server of claim 30 further comprising means for transmitting a presence status update message to mobile terminals having the first mobile terminal as a Pal upon updating the presence state associated with the first mobile terminal.

10 35. The communication application server of claim 32 further comprising means for preventing any indication from being sent to the second mobile terminal of the receipt of the second control message and an indication that the first stored initial voice message was transmitted to the first mobile terminal.

15 36. The communication application server of claim 30 further comprising means for starting a timeout timer associated with the receipt of the incoming call where the timeout timer has a predetermined time period and means for causing processing of the incoming call to the first mobile terminal to be aborted upon the timeout timer reaching the predetermined time period.

20 37. The communication application server of claim 36 further comprising means for starting a timeout timer associated with the receipt of the incoming call where the timeout timer has a predetermined time period and means for causing processing of the incoming call to the first mobile terminal to be aborted upon the timeout timer reaching the predetermined time period before receiving a reply communication from the first mobile terminal.

25

38. The communication application server of claim 37 wherein the means for causing the processing of the incoming call to the first mobile terminal to be aborted includes means for deleting the initial voice message stored in memory.

30 39. The communication application server of claim 30 further comprising means for starting a timeout timer associated with the receipt of the incoming call where the timeout timer has a predetermined time period and means for causing the initial voice message from the second mobile terminal to be transmitted to the first mobile terminal upon receiving a

reply communication from the first mobile terminal before the timeout timer reaching the predetermined time period.

40. A method implemented by a communication application server that processes communications among users in a push-to-talk communication network comprising the steps of:

receiving a first control message concerning a first mobile terminal where the first control message represents an instruction to initiate a process providing flexible acceptance of incoming calls to the first mobile terminal;

in response to the first control message, updating a stored presence state associated with the first mobile terminal to reflect that incoming calls to the first mobile terminal will be processed in accordance with the flexible acceptance;

receiving, following the updating of the presence state associated with the first mobile terminal, a request from a second mobile terminal to initiate a call to the first mobile terminal;

transmitting a second control message to the second mobile terminal in response to said request where the second control message contains presence status information identifying the first mobile terminal as using flexible acceptance.

41. The method of claim 40 wherein the presence status information that identifies the first mobile terminal as using flexible acceptance differs from presence status information transmitted to the first mobile terminal when flexible acceptance is not being used.

42. The method of claim 41 wherein the receipt by the second mobile terminal of the presence status information that identifies the first mobile terminal as using flexible acceptance causes the second mobile terminal to generate predetermined user perceptible first indicia identifying the first mobile terminal as using flexible acceptance.

43. A communication application server that processes communications among users in a push-to-talk communication network comprising:

means for receiving a first control message concerning a first mobile terminal where the first control message represents an instruction to initiate a process providing flexible acceptance of incoming calls to the first mobile terminal;

5

means for updating, in response to the first control message, a stored presence state associated with the first mobile terminal to reflect that incoming calls to the first mobile terminal will be processed in accordance with the flexible acceptance;

10

means for receiving, following the updating of the presence state associated with the first mobile terminal, a request from a second mobile terminal to initiate a call to the first mobile terminal;

15

means for transmitting a second control message to the second mobile terminal in response to said request where the second control message contains presence status information identifying the first mobile terminal as using flexible acceptance.

20

44. The communication application server of claim 43 wherein the presence status information that identifies the first mobile terminal as using flexible acceptance differs from presence status information transmitted to the first mobile terminal when flexible acceptance is not being used.